

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted by the International Bureau under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,461,400 to Ishii et al.

In regards to claims 11, 12, 14, 15, 16, 18 and 19, Ishii et al teaches a display apparatus (Figure 2) comprising

- a liquid crystal display panel including pixels arranged in a matrix
- pixel electrodes (12) provided to the pixels, respectively, and a common electrode (19) provided commonly to the pixels
- scanning lines and signal lines (13) for supplying a voltage to said pixel electrodes
- a drive circuit (94) connected to said common electrode, said scanning lines, and said signal lines, and

- a pen input device for selectively switching the display drive mode when the pen input, where the input from the pen device rewrites the pixels through an application of voltage.

But Ishii et al fails to explicitly teach a control circuit for providing a signal to a drive circuit. However, in liquid crystal display devices, the use of a control circuit for providing a signal to a drive circuit for changing the voltage application is well known in the art. Although not explicitly stated, one of ordinary skill would have reasonably known for a control circuit to exist. Without the control circuit, the input from the pen device would not be capable of transferring the signal to the drive circuit and the display would be non-existent.

In regards to claim 13, although not explicitly state, it would have been apparent to one of ordinary skill to have a variable voltage supplied to the electrodes and a reference voltage supplied to the common electrode in order for the input pen, the control circuit and the driving circuit to compare and relay the necessary information to the display so that the proper desired output can be achieved.

In regards to claim 17, electrophoretic displays are known in the art. Electrophoretic displays are well known to have the same common components and operations as claimed by Applicant.

Prior Art

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449.

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M. Wong whose telephone number is (571)272-2352. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tina M Wong/
Primary Examiner, Art Unit 2874